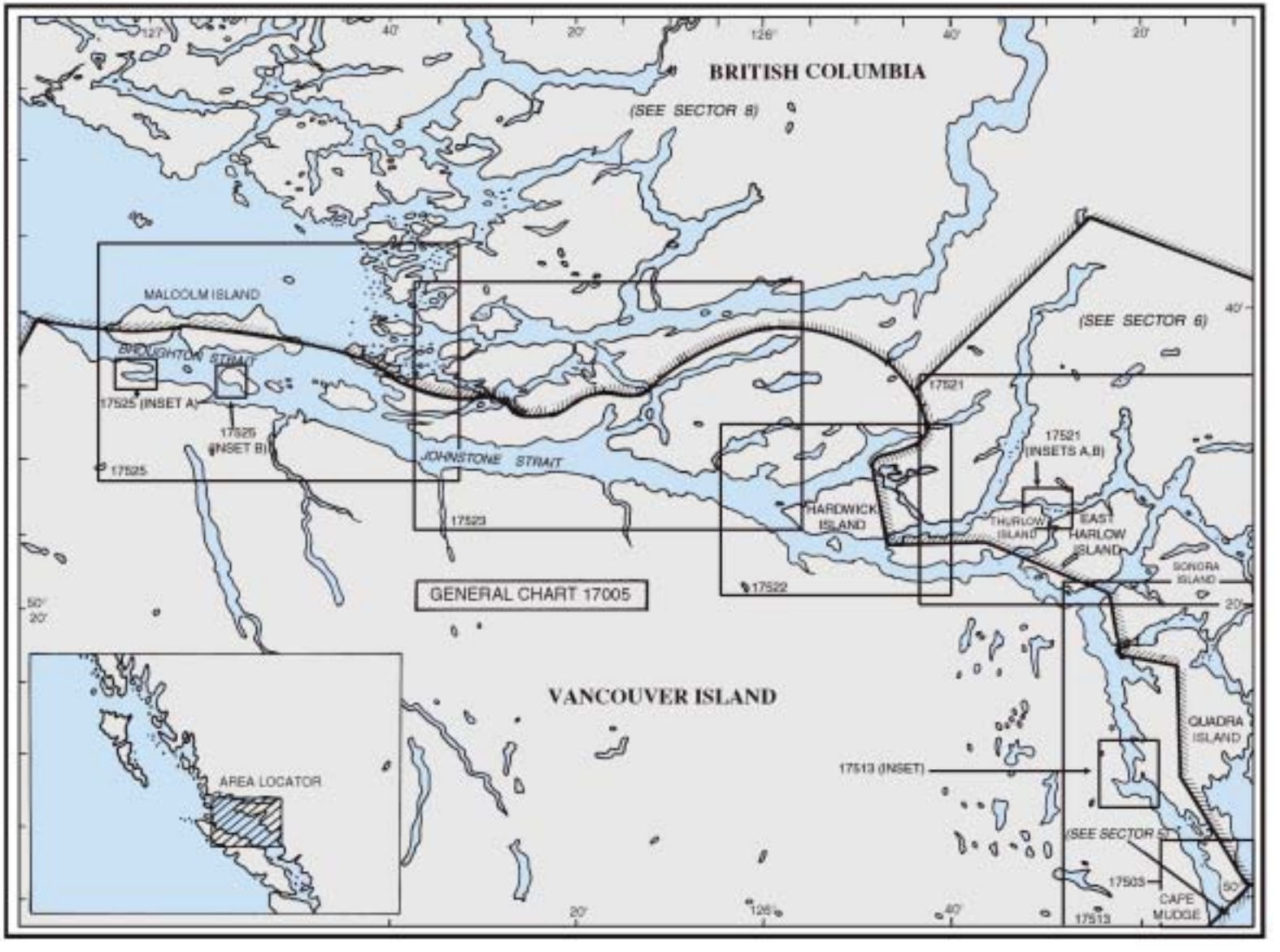
Click on "See Sector" to be hotlinked to that Sector.



Additional chart coverage may be found in CATP2, Catalog of Nautical Charts.

SECTOR **7** —CHAR T INFORMATION

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SECTOR 7

DISCOVERY PASSAGE—CAPE MUDGE TO MALCOLM ISLAND

Plan.—This sector describes Discovery Passage, Johnstone Strait, Broughton Strait, and their respective branches. The general descriptive sequence is NW from Cape Mudge to Malcolm Island.

General Remarks

7.1 Discovery Passage, Johnstone Strait, and Broughton Strait comprise that part of the inner passage which leads along the NE coast of Vancouver Island, a total distance of 94 miles.

Discovery Passage is the only safe navigable channel leading NW from the Strait of Georgia that can be used by vessels other than those with light drafts and local knowledge.

The terrain on the W side of Discovery Passage, to the N of Seymour Narrows, and on the S side of Johnstone Strait is mountainous near the shore; elsewhere, it is comparatively low. Most of the terrain described within this sector is covered with dense pine forests which grow close to the water's edge.

Discovery Passage and Johnstone Strait are deep; however, depths of less than 20m lie in Broughton Strait. The main navigational hazard is formed by Seymour Narrows, in Discovery Passage, where the tidal currents run with great velocity over and around Ripple Rock. The resulting rips, eddies, and upwellings are dangerous. The tidal currents setting in the vicinity of Ripple Shoal and Helmcken Island, in Johnstone Strait, are also hazardous.

Tides—Currents.—The flood tidal current sets 105° at velocities of 5 to 11 knots over the bank, with a depth of 20m, lying close E of Race Point. Strong swirls and rips occur close to this bank and the turbulence may extend up to about 0.8 mile E of the point. Fresh E or SE winds render this race very dangerous to boats.

The flood tidal current in mid-channel, off Race Point, has velocities of 4 to 10 knots. It then turns gradually S along the E side of Discovery Passage towards Copper Cliffs. Between Race Point and Middle Point, a countercurrent runs along the shore when the S current is strong.

The ebb tidal current in mid-channel, off Race Point, sets 322° at velocities of 3 to 6 knots. It then turns steadily W.

The flood tidal current approaching Vancouver Island from Seymour Narrows has a velocity of 4 to 10 knots and divides with a weaker portion setting W into Menzies Bay. The latter current also sets clockwise at a velocity of 1 to 5 knots and returns to a position lying close E of Stephenson Point, where it sets directly across the main current. This causes a formation of violent swirls and rips which extends up to about 0.5 mile SE of Wilfred Point.

The ebb tidal current sets W from Race Point until S of Maud Island. It then runs NW into Seymour Narrows. At a position bearing 132° and distant 0.5 mile from the S extremity of Maud Island, the current sets 284° at a velocity of 4 to 7 knots. At a position bearing 180° and distant 0.3 mile, the current sets 305° at a velocity of 5 to 9 knots.

The ebb is usually stronger near Maud Island than along the shore to the W of Race Point. When the ebb current is strong, an overfall occurs off the SE extremity of Maud Island. Otherwise, there is little turbulence to the S of Seymour Narrows.

The current is relatively weak, with small eddies, along the shore to the W of Race Point. In the approaches to Menzies Bay and bearing 178° distant 0.8 mile from Maud Island Light, the current sets 271° at a velocity of 1 to 4 knots. It then turns towards Stephenson Point and is lost in the bay.

The tidal currents in Johnstone Strait turn from 1.5 to 2 hours after HW and LW along the shore. They attain velocities of 1 to 4 knots in the wider parts of the strait and, at times, up to 6 knots in the narrower parts. Tide rips are formed in places.

The tidal currents in Johnson Strait, to the W of Hardwicke Island, seldom exceed a velocity of 3 knots.

The tidal currents to the S of Seymour Narrows attain velocities of 6 knots and turn at HW and LW along the shore. The N ebb current begins immediately after HW.

The tidal currents to the N of Seymour Narrows are comparatively weak and do not exceed velocities of 3 knots. The N ebb current and the S flood current begin from 1.5 to 2 hours after HW and LW along the shore.

The tidal currents off Cape Mudge have an average maximum velocity of 5.7 knots. At times they may attain velocities of up to 7 knots; the flood sets 165°. These currents turn up to 30 minutes after HW and LW along the shore.

Regulations.—The waters described within this sector lie within the Vancouver Vessel Traffic Service (VTS) System. For further information on reporting requirements, see paragraph 1.1. Details of services are also provided in United States Coast Pilot 7, Pacific Coast.

Anchorage.—Anchorages are available throughout the area. Local vessels frequent a number of small ports which are active in the logging, fish-canning, and tourist trades.

Caution.—The navigation of Discovery Passage is very simple, the chief difficulty is caused by the tidal currents in Seymour Narrows, which may attain velocities of up to 16 knots with maximum tides.

Discovery Passage

7.2 Discovery Passage leads 23 miles NNW, between the coast of Vancouver Island and the W coasts of Quadra Island and Sonora Island, to Johnstone Strait. At its N end, Okisollo Channel and Nodales Channel enter the passage from the E. Except for Seymour Narrows, located 12 miles N of the S entrance, the passage is wide and deep.

The terrain to the S of Seymour Narrows is of moderate height, the E side being more broken and hilly. The terrain to the N of the narrows becomes steep, mountainous, and attains a considerable elevation, especially on the W side, where Mount Menzies rises to a height of over 1,230m. This mountain has many spurs, with deep valleys between them, on which snow

often remains until June. The terrain on both sides of the passage is covered with dense fir forests.

Discovery Passage is entered from the S between Shelter Point, which has been previously described in paragraph 5.26, and Cape Mudge, 3.3 miles N.

Cape Mudge (50° 00'N., 125° 11'W.) is flat, wooded, and terminates in conspicuous white earth cliffs interspersed with vegetation. These cliffs, 61m high, face SE and decrease gradually in height towards the entrance of the passage. A light is shown from a structure standing on the point and a radio tower, 38m high, is situated close S of it.

Wilby Shoals extend up to about 2.5 miles ESE from the S extremity of Cape Mudge and a patch, with a depth of 3m, lies near their extremity. The edge of these shoals is steep-to and marked by kelp in summer. A lighted buoy marks the S extremity of the shoals and a buoy marks the E extremity.

Caution.—During the summer, numerous small pleasure craft may be encountered in the vicinity of Cape Mudge.

A heavy race, which attains a rate of 9 knots on the flood and 7 knots on the ebb, exists between Cape Mudge and Shelter Point during the flood current. Strong S or SE winds render this race dangerous to small vessels.

If the S flood current is running at the S entrance, care must be taken to avoid being set over towards Wilby Shoals. If the N ebb current is running at the S entrance, care must be taken to avoid being carried into Sutil Channel.

7.3 The **Campbell River** (50° 01'N., 125° 14'W.) (World Port Index No. 18450), a harbor, lies on the E coast of Vancouver Island, at the S entrance to Discovery Passage.

Campbell River Village is situated on the W side of the harbor. This village is primarily a tourist center because of its location at the main entrance to Strathcona Park, an alpine area of outstanding beauty. Logging, fishing, and hydroelectric development industries are also situated in the vicinity of the harbor.

Depths—Limitations.—Campbell River Village, protected by a breakwater, provides facilities for small vessels, sport and pleasure craft, and ferries.

A wharf, used by bulk carriers to load ore, is situated 1.3 miles N of the village, at the S end of a spit. It is 122m long and has a depth of 10.3m alongside.

Pulp Wharf, 152m long, has a depth of 7.8m alongside; Paper Wharf, also 152m long, has a depth of 4.6m alongside. Vessels up to 179m in length and 11.6m draft have been handled in the harbor, but it is reported that silting has occurred.

Aspect.—Tyee Spit, a low neck of land, is located on the E side of the river mouth, about 1.3 miles N of the village. Several marinas and repair ramps for aircraft are situated on the W side of this spit, inside the river entrance.

An aeronautical lighted beacon is shown from a structure standing at the N end of the spit when seaplanes are operating.

A lighted range indicates the entrance channel leading into the river, which is navigable by small boats. A light is shown from the breakwater.

Pilotage.—Pilotage is compulsory. Pilots board at Victoria. Vessels must confirm their ETA 24 hours, 12 hours, and 4 hours in advance.

Photo copyright Mike Mitchell

Cape Mudge Light

Anchorage.—Anchorage can be taken off the village only during good weather. At other times, vessels must anchor in Duncan Bay.

Caution.—A submarine cable and a submarine pipeline, which may best be seen on the chart, extend into the passage in the vicinity of Campbell River Village.

Silting has been reported in the entrance channel leading to the Campbell River and depths may be less than charted.

The entrance to the river, W of Tyee Spit, and the area in Discovery Passage to the NE of the spit are sometimes used as a water aerodrome.

7.4 Quathiaski Cove (50° 03'N., 125° 13'W.) (World Port Index No. 18443) lies on the E side of the passage, 4 miles N of the entrance, and affords shelter to small vessels. Grouse Island lies in the middle of this cove and nearly divides it into two parts. A rocky ledge, which dries, extends SE from the SE extremity of the island. A light is shown from a structure standing at the seaward extremity of this ledge. The S entrance channel is clear of dangers, with the exception of the above-mentioned ledge.

A settlement is situated in the SE corner of the cove and has facilities for ferries and pleasure craft. A ferry service runs between this cove and Campbell River Village.

Small vessels can anchor, in depths of 9 to 14.6m, in the SE part of the cove

7.5 Gowlland Harbor (50°05'N., 125°15'W.) (World Port Index No. 18442), a landlocked anchorage, lies on the E side of the passage, 2 miles N of Quathiaski Cove. A least depth of 7.3m lies in the entrance channel and depths of 16.5 to 18m prevail at the anchorage. The harbor is entered between the N end of Gowlland Island and Entrance Rock. A number of rugged and wooded islets front the harbor. Several floats and marinas are situated within the harbor.

Steep Island (50°05'N., 125°15'W.) lies close off the NW end of Gowlland Island. It is steep-sided and has cliffs on its SW side. A light is shown from a structure, 6m high, standing at the W side of the island. A beacon stands on the NW extremity of the island.

A boat passage, giving access to the S part of the harbor, lies between the SW end of Gowlland Island and April Point. A buoy is moored about 0.2 mile NW of the latter point.

The **Vigilant Islets** (50°05'N., 125°15'W.), four in number, lie close off the N extremity of Gowlland Island. The westernmost and tallest islet is 5m high. A detached patch, with a least depth of 7.1m, lies close NW of these islets.

Entrance Rock, with a depth of 0.6m, lies on the N side of the entrance, about 0.4 mile N of the easternmost islet. A shoal, with depths of less than 4.5m, fronts the SE side of this rock. A detached patch, with a depth of 7.3m, lies in the entrance channel, about 0.1 mile SW of Entrance Rock. The navigable channel leading between the Vigilant Islets and Entrance Rock is about 135m wide.

Spoil Rock, with a depth of 6.4m, lies almost in the fairway, about 0.1 mile ENE of the easternmost islet of the group. It is marked by kelp during the summer.

Tides—Currents.—The average tides at Gowlland Harbor rise 3.3m at springs and 2.1m at neaps.

The tidal currents attain rates of up to 5 knots, at times, across the entrance to the harbor. An eddy sets S, close W of the Vigilant Islets, during the N tidal current. The tidal currents are usually not felt within the entrance.

Anchorage.—Anchorage can be taken, in depths of 15 to 18m, mud, within the harbor, S of Doe Islet.

Caution.—A submarine cable, which may best be seen on the chart, lies between the S end of Gowlland Island and a point located 0.2 miles E of April Point.

Care is necessary when approaching the entrance due to the strong tidal currents.

7.6 Duncan Bay (50°04'N., 125°17'W.) (World Port Index No. 18441) indents the W side of Discovery Passage, 3.5 miles NNW of Campbell River Village. It is easy to access. A shoal, with many boulders lying on it, extends up to about 0.4 mile N of the SE entrance point of the bay. A detached shoal, with a least depth of 10.7m, lies close NE of the same point and is marked by kelp during the summer.

Depths—Limitations.—Pulp Wharf, the W berth, is 152m long and has a depth of 9.8m alongside. It is equipped with conveyor belts and a moveable spout.

Shipping Wharf, the N face, is 122m long, with a depth of 9.1m alongside.

Aspect.—A prominent pulp and paper mill is situated on the S shore of the bay. It has two conspicuous chimneys. The southernmost is 113m high and the northernmost is 52m high.

Two radio masts are reported to stand in the vicinity of a barge terminal at the W side of the bay.

Anchorage.—Good anchorage can be taken, in depths of 27 to 29m, sand, in the bay. The anchorage lies well out of the tidal currents and is sheltered from all but NW winds.

Caution.—A submarine sewage outfall, which may best be seen on the chart, extends about 0.2 mile NE from the E side of the SE entrance point.

Log storage areas and several private mooring buoys exist in the W side of the bay.

7.7 Middle Point (50°05'N., 125°18'W.) is located on the W side of the passage, 1.3 miles NW of the mill at Duncan Bay. It is low, shelving, and rocky. Warspite Rock, a pinnacle, lies about 0.2 mile E of the point and has a least depth of 1.2m. This rock is marked by kelp during the summer; however, the kelp is run under at times by strong tidal currents.

Copper Cliffs (50°06'N., 125°16'W.) stand on the E side of the passage, close N of the entrance to Gowlland Harbor. This series of cliffs has traces of copper ore and attains heights of 61 to 70m. White Cliffs, another series of cliffs, is located about 1.3 miles NW of Copper Cliffs. The shore extending NW of White Cliffs is fringed by a beach formed of boulders and shingle.

Race Point (50°07'N., 125°19'W.) is located on the W side of the passage, 1.5 miles NNW of Middle Point. This point consists of a bare, bold, steep-to, and rocky bluff. It is 20m high and marked by a light.

Two rocky banks, with least depths of 18.3m and 13.7m, lie about 0.2 mile E and 0.5 mile NE, respectively, of the point.

7.8 Menzies Bay (50°07'N., 125°23'W.) (World Port Index No. 18440) lies on the W side of Discovery Passage, close W of the S entrance of Seymour Narrows. Lumber shipping facilities are situated on the S side of this bay. Vessels sometimes anchor within the bay to await favorable tidal currents in Seymour Narrows.

Foul ground, marked by kelp during the summer, extends up to about 0.1 mile SE from Stephenson Point, the N entrance point of the bay.

Defender Shoal, which dries 1.5m, lies in the middle of the bay. It is composed of sand and is steep-to on the E side. A narrow channel, with a least depth of 9.1m, leads NE of the shoal and into the NW part of the bay. Numerous piles exist between this shoal and the SW side of the bay.

Tides—Currents.—Part of the weak flood current, which flows W along the shore from a position about midway between Race Point and Huntingford Point, is deflected NW and lost in the middle of Menzies Bay. The W edge of the ebb current flows weakly against Stephenson Point; that part of the current which flows W into Menzies Bay is lost almost immediately. Very little swirl exists W of a line joining Huntingford Point and Stephenson Point.

Anchorage.—Temporary anchorage, with no inconvenience from tidal currents or eddies, can be taken, in depths of 9 to

11m, within the S part of the bay. Vessels should exercise care to avoid two shoal patches, with depths of 4.9m and 6.4m, lying close N of the abandoned ore facility. This anchorage is convenient when awaiting the turn of the tidal currents in Seymour Narrows.

Secure anchorage can be taken, in depths of 11 to 13m, mud and sand, in the NW part of the bay. This anchorage is out of the range of the tidal currents.

Seymour Narrows

7.9 Seymour Narrows (50°08'N., 125°21'W.), the narrowest portion of Discovery Passage, commences about 1 mile NW of Race Point. The narrows are about 2 miles long and not less than 0.4 mile wide. The shores on either side are high, rugged, and steep-to. Passage should only be attempted at or near slack water unless in possession of intimate local knowledge. The greatest care must be observed at night during all stages of the tidal currents, even when in possession of the most intimate local knowledge.

Vessels are recommended to follow the reporting procedures prescribed for the Vancouver Traffic Zone (VTS) when approaching the narrows.

Tides—Currents.—The MHW interval at Seymour Narrows is 2 hours 58 minutes. The tides rise 4.2 to 5m at springs and 3.4m at neaps.

The tidal currents reach velocities of up to 16 knots with the flood setting S and the ebb N. When either current is running at strength, the eddies and swirls are extremely heavy. When the currents are opposed by a strong wind, the races become very dangerous to small vessels.

With the flood current setting along the W shore, the eddies and rips start about opposite North Bluff. The upwellings over Ripple Rock start under the power cables and from there to the W shore, the water is very turbulent. The rips and upwellings then curve gently to mid-channel, S of Maud Island Light. The rips extend S of the light to the middle of the channel, where they meet the rips and eddies from the W shore, and culminate in large whirls and eddies. This area of maximum turbulence extends beyond Race Point and gradually diminishes towards the entrance of Gowlland Harbor. The maximum strength of the flood current occurs in the vicinity of Maud Island.

With the ebb current, smooth water extends N to North Bluff. At this point, the rips from both the E and W sides meet and culminate in large, smooth whirls and eddies. Due to the course of the main current through the narrows, the upwellings over the S head of Ripple Rock occur much farther over towards the W shore. Therefore, on the ebb current, no turbulence is met until abeam of North Bluff.

Between North Bluff and Puget Bluff, the channel is all whirls and eddies. These diminish gradually farther N and disappear almost entirely abreast of Separation Head. The maximum strength of the ebb current is encountered in the vicinity of Maud Island Light.

A notable feature during the ebb is that 1 hour after maximum current the turbulence on both sides of the narrows greatly diminishes, in fact, the change is quite remarkable. Vessels not wishing to proceed at the time of maximum current will find favorable passage by waiting for 1 hour.

The time interval between slack water and HW, or LW, along the shore in the narrows varies from 10 minutes to 4 hours. The duration of slack water may amount to 12 minutes, but when the range of tide is great, slack water lasts for only a few minutes.

Depths—Limitations.—Ripple Rock (50°08'N., 125°21'W.), formerly a shoal hazard, lies in the middle of the S end of the narrows between Maud Island and Vancouver Island. This rock has two heads which lie about 90m apart.

The depths over this danger have been increased by demolition. At LW, the northernmost head has a depth of 15.1m and the southernmost head has a depth of 13.7m. The entire area in the vicinity of the rock has been swept with a wire drag to a depth of 12.5m at LW.

The position of Ripple Rock is indicated, except for a short time at slack water, by upwellings over the least depth on the southernmost head.

The channels leading on either side of Ripple Rock are about 0.2 mile wide. The depths lying in the middle of the E and W channels are 59m and 64m, respectively.

To proceed against the tidal current during the period of spring tides and to ensure maximum control, a speed of 13 knots is necessary during the first and last hours of the current; a speed of 15 to 16 knots during the second and fourth hours; and a speed of 17 knots to proceed through at the full strength of the tide.

During neap tide periods, when the velocity of the tidal current is weaker, less power than that given above is required to proceed through the narrows at the full strength of the current. A speed of 3 to 4 knots in excess of the maximum predicted current velocity would be adequate.

Vessels proceeding through the narrows with the tidal current should adjust their speed as necessary for maximum control.

A vessel navigating the narrows against the tidal current and meeting another proceeding in the opposite direction should pay regard to such vessel, which may not be in full control, and should therefore give that vessel as much clearance as possible.

Vessels of low power, vessels with tows, small craft, and vessels without any local knowledge are strongly advised to navigate the narrows at or near slack water only. In these circumstances, no special directions are necessary, and a mid-channel course may be steered.

Caution.—With the removal of Ripple Rock as a navigational danger, the full width of Seymour Narrows is available, but regard should be given to the extreme turbulence that is present when the tidal currents are running at strength, particularly during the period of spring tides.

An overhead power cable, with a vertical clearance of 55m, spans the narrows between Maud Island and Wilfred Point. This cable, which may best be seen on the chart, is marked by several orange spheres suspended from it.

Discovery Passage—North of Seymour Narrows

7.10 From Seymour Narrows, the N part of Discovery Passage extends about 12 miles N to its junction with Johnstone Strait. The tidal currents in this portion of the passage do not exceed a rate of 3 knots.

Plumper Bay (50° 10'N., 125° 20'W.), entered close N of Plumper Point, lies on the E side of the passage, close N of the entrance to the narrows. It is a convenient anchorage for vessels awaiting favorable tidal currents in the narrows.

A conspicuous boulder lies on the S side of the bay, 0.3 mile ESE of Plumper Point. A detached rocky patch, with a depth of 11m, lies in the middle of the bay, about 0.2 mile NNE of the boulder. This patch must be avoided when anchoring. A rock, with a depth of 1.8m, lies near the head of the bay, about 0.1 mile off the SE shore.

Anchorage can be taken, in depths of 14 to 18m, mud and sand, within the bay. This anchorage is sheltered, out of the tidal currents, and easy to enter.

Brown Bay lies on the W side of the passage, close N of the narrows. It is the site of a marina but is too deep for anchorage.

Separation Head, cliffy and steep-to, is located on the E side of the passage and marked by a light. This point separates Plumper Bay from Deepwater Bay, which has depths in excess of 40m. Another light is shown from a structure standing 1 mile SSW of the head.

Directions.—Vessels with adequate power to maintain maximum control should experience no difficulty in making the passage to the N at any stage of the ebb current, provided they use the channel leading E of Ripple Rock.

Vessels should pass 0.1 mile off Race Point and steer to pass Maud Island Light at the same distance. When this light bears 000°, they should change course gradually to starboard in order to pass it at a distance of 90 to 180m. Vessels should then keep in the tongue of the current and steer a course towards a position lying in mid-channel off North Bluff. The eddies from both sides of the channel meet in the vicinity of this position. Thereafter, vessels should steer a mid-channel course.

Vessels bound N from Menzies Bay, during a strong ebb current, are advised to proceed S of Race Point before turning to approach the narrows.

Vessels bound S against the N ebb current should steer a mid-channel course until nearly abeam of North Bluff. They should then steer a course to pass Maud Island Light at a distance of 90 to 180m. A course should then be steered to pass Race Point at a distance of about 180m.

Vessels bound N against the S flood current, after passing Gowlland Harbor, should keep to the E of mid-channel to avoid the heavy swirls off Race Point. They should round this point at a distance of 0.4 mile and then steer a course of about 285° for the clearly visible apex of the turbulent-free water. Vessels should then pass Maud Island Light at a distance of 0.1 mile and steer to pass North Bluff and Puget Bluff in mid-channel. The width of the turbulent-free water, abeam of Maud Island Light, is much less than during the ebb current because of the upwellings curving E from Ripple Rock.

When approaching the narrows from the S, care should be taken to avoid being set into the violent rips which extend up to about 0.4 mile S of Maud Island.

Vessels bound S with the S flood current should keep in mid-channel until North Bluff is abeam. They should then steer to pass Maud Island Light at a distance of 0.1 mile. Vessels should hold this course, keeping in the tongue of the current, until clear of the rips that extend S of Maud Island Light. They should then change course to about 105° until Cape Mudge is open to Orange Point, the latter bearing about 150°. Vessels should then alter course to S favoring the E shore to obtain full benefit of the tidal current. Care should be taken to avoid the eddy lying S of Maud Island.

Caution.—A wreck, with a depth of 11.5m, lies close E of Maud Island. This wreck is marked by buoys and used by divers.

7.11 Kanish Bay (50° 16'N., 125° 22'W.) indents the E side of Discovery Passage, about 4 miles N of **Separation Head** (50° 11'N., 125° 21'W.). This bay is too deep for anchorage, except for small vessels with local knowledge.

The Chained Islands lie along the S shore of the bay. Granite Bay, with the remains of a logging camp, is located in a narrow arm extending from the SE part of Kanish Bay. The entrance fairway is less than 90m wide and has a least depth of 6.1m. A rock, with a depth of less than 1.8m, lies on the N side of the approach to this bay.

Granite Point (50° 17'N., 125° 23'W.), the N entrance point of Kanish Bay, separates it from Okisollo Channel. This point is low, rounded, and steep-to.

McMullen Point is located on the W side of the passage, about 2 miles SSW of Granite Point. This steep-to headland is marked by a light.

Elk Bay (50° 17'N., 125° 26'W.) indents the W side of the passage, opposite the W entrance of Okisollo Channel. This bay is entered N of Moriarty Point and about 1 mile WSW of Granite Point. The tidal currents setting off Moriarty Point have an average maximum velocity of 3 knots but can, at times, attain a velocity of 3.8 knots.

Anchorage can be taken, in a depth of 27m, mud and sand, within the bay about 0.5 mile off the drying flat at the head. The anchorage is open to the N and E, but lies out of the tidal currents. This anchorage is often used by vessels awaiting slack water at Seymour Narrows.

The **Cinque Islands** (50° 18'N., 125° 24'W.), a short chain of islets and rocks, lie on the E side of the passage, close W of the N entrance point of Okisollo Channel. A light is shown from a structure standing on the W shore of the largest islet.

Discovery Passage leads about 3 miles N from this chain and joins Johnstone Strait.

Howe Island, 105m high, lies close off the E entrance point of Johnstone Strait, about 2.5 miles N of the Cinque Islands.

Johnstone Strait

7.12 Johnstone Strait (50° 21'N., 125° 27'W.) is from 1 to 2 miles wide and leads WNW along the N side of Vancouver Island. This strait, which is deep throughout, extends for 54 miles between the junction with Discovery Passage and the W end where it joins Broughton Strait.

The S side of the strait is formed by a continuous series of high, steep, mountain ranges. These ranges rise abruptly from the water's edge and some of the higher peaks are covered with snow throughout the entire year. The ranges are separated by valleys through which flow several rivers of considerable size.

The N side of the strait is high and mountainous in most places, but it is not as rugged as the S side, nor do the mountains attain such great heights. It is indented by several channels and inlets.

Chatham Point Light

The N side is formed by the Thurlow Islands, Hardwicke Island, a portion of the mainland, and West Cracroft Island.

The shores on both sides of the strait are densely wooded, with the exception of the higher peaks, which are bare.

Several anchorages are available on the N side of the strait. There are no anchorages on the S side.

Chatham Point (50˚ 20'N., 125˚ 26'W.) is located on the SW side of the confluence of Discovery Passage, Johnstone Strait, and Nodales Channel. It is low, wooded, and rocky. Several prominent buildings stand on the point and a radio tower is situated 0.3 mile NW of them.

Foul ground fronts the shore to the N of the point. Beaver Rock, with a depth of less than 2m, lies about 0.3 mile NNW of the point and a drying rock, marked by a light, lies close S of it.

Rock Bay (50˚ 20'N., 125˚ 29'W.) indents the S side of Johnstone Strait, close W of Chatham Point, and a light is shown from its W entrance point. The ruins of a pier front the W side of this bay.

Turn Island (50˚ 21'N., 125˚ 28'W.), 98m high and wooded, lies on the N side of the strait, 1.3 miles NW of Chatham Point. It is separated from East Thurlow Island by a narrow passage with depths of less than 9m. A light is shown from the S side of the island.

Caution.—Vessels should stay at least 0.5 mile from Chatham Point.

A submarine power cable, which may best be seen on the chart, extends W from Beaver Rock to the shore.

7.13 The **Walkem Islands** (50˚ 22'N., 125˚ 32'W.), a group of mostly-wooded islands and rocks, lie on the N side of Johnstone Strait. A light is shown from a structure standing on a drying rock lying close off the SW end of the southernmost island.

Caution.—The tidal currents run strongly between the Walkem Islands and, at times, tide rips, which are dangerous to small vessels, are formed. Vessels should pass these islands with care and at a distance of not less than 0.3 mile.

Ripple Point (50˚ 22'N., 125˚ 35'W.), marked by a light, is located on the S side of Johnstone Strait. This point rises steeply to the mountains of the Halifax Range. The ebb tidal current sets W and attains a velocity of 2 to 5 knots off the point. The flood tidal current sets 105˚. Tide rips, which are dangerous to small vessels, are formed off the point at times.

Needham Point (50˚ 23'N., 125˚ 36'W.) is the E entrance point of Knox Bay. This bay has depths too deep for anchorage. Heavy tide rips are sometimes formed off the point.

Vansittart Point (50˚ 23'N., 125˚ 44'W.), marked by a light, is located on the N side of Johnstone Strait, at the foot of Mount Vansittart.

Vere Cove (50˚ 23'N., 125˚ 46'W.) is easy to access and affords anchorage to small vessels. The anchorage has depths of 18 to 31m and lies out of the tidal currents, but is exposed to the W. The shores of the cove are steep and thickly wooded. Tyee Point, the S entrance point of the cove, is marked by a light.

7.14 Camp Point (50˚ 23'N., 125˚ 50'W.), a rounded projection, is located on the S side of Johnstone Strait and marked by a light. The shore extending ESE of this point is fringed with drying rocks. The shore extending W of the point

is steep and cliffy with mountains rising abruptly from the water's edge.

Race Passage East Light is shown from a structure standing on an above-water rock lying 0.5 mile ESE of the point.

Ripple Shoal, with a least depth of 3m, lies in the fairway of Johnstone Strait between Camp Point and Eden Point. It has several heads and is about 1 mile long. Kelp grows on the shoal during the summer, but it is usually run under by the tidal current.

The tidal currents off Camp Point have an average maximum velocity of 5 knots and, at times, attain velocities of up to 7 knots. The flood current sets 110°. Slack at HW and LW occur 55 minutes and 1 hour 5 minutes, respectively, before the corresponding slack water in Seymour Narrows. The tidal currents in the vicinity of Ripple Shoal, at times, attain velocities of 5 knots, often causing eddies and ripples.

7.15 Helmcken Island (50° 24'N., 125° 52'W.) lies in the middle of Johnstone Strait. This island is thickly wooded and its shores are rugged and indented, especially on the N side. Billy Goat Bay lies on the N side of the island and is fronted by several islets.

A prominent storage tank and a radio mast stand at the E end of an islet, 49m high, which lies close NE of Billy Goat Bay.

A light is shown from a structure standing on a drying rock located 0.3 mile N of the E end of Helmcken Island. A beacon stands on the E end of an islet, 40m high, which fronts Billy Goat Bay, about 0.4 mile WNW of the light.

The range formed by the light and the beacon indicates the channel leading through the E part of Race Passage, S of Ripple Shoal.

Lights are also shown from the N and S extremities of Helmcken Island.

Current Passage and Race Passage, each over 0.5 mile wide, lead N and S, respectively, of Helmcken Island and are both clear of dangers.

The tidal currents run strongly in Current Passage and Race Passage, attaining velocities of up to 6 knots at springs. The flood current sets 120° in Current Passage and 110° in Race Passage. These currents cause numerous and frequently strong eddies, especially during bad weather when they sometimes become dangerous to small vessels.

Caution.—A Traffic Separation Scheme (TSS) extends from close W of Vansittart Point to the W end of Hardwicke Island. It is recommended for use by all vessels.

The separation of traffic is achieved by using Helmcken Island and Ripple Shoal as natural obstacles to divide the E traffic from the W. No inshore traffic zones are provided in this scheme.

It is recommended that eastbound traffic pass to the S by using Race Passage and westbound traffic pass to the N by using Current Passage.

In some instances, due to certain vessels having difficulty in making the turn into Current Passage and clearing Ripple Shoal, vessels may be encountered proceeding against the recommended traffic flow within Race Passage. Such vessels proceeding against the traffic flow are advised to warn the Vessel Traffic Service (VTS) System and other ships in the vicinity.

Peterson Islet (50° 23'N., 125° 55'W.) lies close to the S shore of the strait, about 1 mile SW of the W end of Helmcken Island. A light is shown from this islet.

Earl Ledge extends up to about 0.3 mile S from the S shore of Hardwicke Island, about 1 mile WNW of the W end of Helmcken Island. A light is shown from the S extremity of this ledge.

Kelsey Bay lies on the NW side of the entrance to Salmon Bay, 1.8 miles W of Peterson Islet. The shore of this bay is fronted by a small wharf, with a depth of 8m alongside, which is used by small craft.

Hardwicke Point, located on the N side of the strait, is the W extremity of Hardwicke Island and lies 2.3 miles NW of Earl Ledge.

Yorke Island, 104m high and wooded, lies in the entrance to Sunderland Channel, about 0.3 mile NNW of Hardwicke Point. Several small islets, the largest being 8m high, lie 0.3 mile S of the island.

Clarence Island, 59m high and wooded, and Fanny Island, 4m high and bare, lie 0.3 mile and 0.5 mile, respectively, NW of Yorke Island. A light is shown from the S side of Fanny Island.

7.16 Blenkinsop Bay (50° 29'N., 126° 00'W.) provides good convenient anchorage. It lies on the N side of the junction of Johnstone Strait and Sunderland Channel. The W side of the bay is high. The E side of the bay is of moderate height and slopes gradually to Tuna Point, which is marked by a light. Mary Island, lying 0.5 mile SE of the latter point, has prominent white cliffs on its S side. Extensive drying flats front the head of the bay. Vessels can obtain sheltered anchorage, in depths of 11 to 18m, mud with good holding ground, within the W part of the bay.

Sunderland Channel (50° 27'N., 125° 58'W.), wide and free of dangers, is entered from the W between Fanny Island and Mary Island; about 7 miles from the W entrance, the channel branches NE into Topaze Harbor and SE into Wellbore Channel.

The tidal currents in the channel seldom exceed a velocity of 1.5 knots, but heavy tide rips sometimes occur in the W entrance.

Seymour Island and Poyntz Island are 38m and 47m high, respectively, and lie in mid-channel, about 5 miles ENE of the W entrance. A light is shown from the S side of Seymour Island.

Topaze Harbor (50° 30'N., 125° 50'W.) provides sheltered anchorage. Vessels can anchor, in depths of 18 to 24m, within this harbor or in the entrance to Jackson Bay, which indents its N side.

Wellbore Channel separates Hardwicke Island from the mainland and leads to Chancellor Channel. It is deep and presents no problems, provided a mid-channel course is maintained.

Jesse Island (50° 28'N., 126° 02'W.), 40m high and sparsely wooded, lies close to the N shore of the strait, about 1 mile W of Tuna Point. The passage leading N of this island may be used by small craft.

7.17 Port Neville (50° 30'N., 126° 05'W.), an inlet, extends 7.3 miles NE and affords secure anchorage to small craft. It is

entered between Ransom Point, located 2 miles WNW of Jesse Island, and Neville Point, 0.5 mile WNW. Milly Island, 82m high and wooded, lies close S of Neville Point.

The settlement of Port Neville is situated on the E side of the inlet, 0.5 mile N of Ransom Point. It is fronted by a small wharf with a depth of 6m alongside. The approaches are deep and there is a depth of 7.3m in the entrance channel as far as the settlement.

The tidal currents in Johnstone Strait, off the entrance to Port Neville, have an average maximum velocity of 3 knots, but at times may attain a velocity of 3.8 knots. The flood current sets 110°.

Stimpson Reef (50° 30'N., 126° 12'W.), which dries 1.5 to 2.7m, lies about 4.3 miles WNW of the entrance to Port Neville. This reef extends up to about 0.3 mile offshore and is steep-to on its S side. A beacon marks the drying portion of the reef.

The **Broken Islands** (50° 31'N., 126° 18'W.), a group of islands and rocks, lie on the N side of Johnstone Strait. They are located on the E side of the approach to Port Harvey and Havannah Channel, about 3.5 miles WNW of Stimpson Reef. The southernmost and largest island is 73m high and wooded. A light is shown from the SW extremity of this island. Foul ground exists between the islands and rocks in the group and extends between them and the mainland.

The tidal currents in Johnstone Strait, off this group, have an average maximum velocity of 3 knots and, at times, may attain a velocity of 3.8 knots. The flood current sets 100°.

Escape Reef (50° 31'N., 126° 21'W.), with a depth of less than 1.8m, lies on the N side of Johnstone Strait. It is located on the W side of the approach to Port Harvey and Havannah Channel, about 2 miles W of Broken Islands Light.

Hull Rock (50° 32'N., 126° 18'W.), with a depth of less than 1.8m, lies in the approach to Port Harvey and Havannah Channel, about 1 mile NNW of Broken Islands Light. This rock is steep-to and not marked by kelp.

The common approach to Port Harvey and Havannah Channel lies between Broken Islands and the SE shore of West Cracroft Island, about 0.8 mile NW.

Port Harvey (50° 33'N., 126° 17'W.), an inlet, extends about 2 miles NNE from the approaches. Mist Islets, the largest being 78m high, lie on the E side of this inlet. During the fishing season, floats for small craft and marine farm facilities are established at various places within the inlet.

Anchorage can be taken, in depths of 12 to 14m, mud, within the inlet, close N of Mist Islets.

7.18 Havannah Channel (50° 32'N., 126° 17'W.) leads 4.5 miles NE from the common approach junction with Port Harvey. This channel is entered between Domville Point, located 1 mile NNE of Broken Islands Light, and Harvey Point, 0.5 mile NNE.

The Havannah Islets, a group of islets and rocks, front the N shore of the channel and lie about 1 mile E of Harvey Point. A light is shown from the southernmost islet. Lily Islet, marked by a beacon, lies in mid-channel, about 1 mile ENE of Domville Point. Bockett Islets, a group of islets and rocks, lie in mid-channel, about 0.5 mile E of Havannah Islets. The largest islet of this group is 67m high.

Whitebeach Point is located on the S side of the channel, 2.8 miles ENE of Domville Point. It is low and fringed by a conspicuous white, sandy beach.

Hull Island, 158m high and wooded, lies in mid-channel, 0.5 mile NE of Whitebeach Point, and Mistake Island, 72m high, lies close off its S side.

Boughey Bay, an arm of Havannah Channel, is entered close SE of Hull Island. This bay extends SSE for about 1.3 miles and Boughey Shoal, with a depth of 5.5m, lies in the middle of its entrance. Anchorage can be taken in depths of 20 to 27m close to the head of the bay. During strong SE gales, the full force of the wind enters the bay through a valley lying to the S. Under these circumstances, vessels are advised not to anchor.

From Whitebeach Point, Havannah Channel extends N for 2.5 miles to the junction of Call Inlet and Chatham Channel. Chatham Channel leads 5 miles NW to Knight Inlet and is described in paragraph 8.13.

Soderman Cove, a small indentation, lies on the W side of the channel, about 0.5 mile W of the N end of Hull Island. Sheltered anchorage can be taken, in a depth of 27m, sand and gravel, within this cove. Marine farm facilities may exist in the cove.

The Indian Islands, two in number, lie close off the E shore of the channel, E of Hull Island. These islands are joined to the shore by foul ground. Matilpi, an abandoned Indian village, is situated on the mainland close E of the islands.

Call Inlet (50° 35'N., 126° 11'W.), the NE continuation of Havannah Channel, is 1 to 1.5 miles wide and extends about 12 miles ENE. The shores of the inlet are high and precipitous. The N side rises abruptly to mountains up to 1,445m high. The inlet terminates in a low swamp, with a valley extending ENE from it. Log storage areas may exist near the S side of the head.

The depths in the inlet are, in most places, too deep for anchorage.

Call Shoal (50° 36'N., 126° 08'W.), with a least depth of 10.5m, lies in the fairway channel leading into the inlet, about 2.3 miles inside the entrance.

7.19 Forward Bay (50° 31'N., 126° 23'W.), a wide but slight indentation, lies on the N side of the strait, 1.5 miles WNW of Escape Reef. Anchorage can be taken, in depths of 27 to 29m, close SE of a drying flat fronting the head of the bay. Bush Islets lie on a reef that extends up to about 0.4 mile seaward from the W side of the bay entrance.

Boat Bay indents the N shore of the strait, 6 miles W of Forward Bay. A number of rocks and shoals, marked by kelp in summer, lie within 0.2 mile of the shore extending between this bay and Forward Bay. An islet, 44m high, lies in the W part of the bay and foul ground extends between it and the W shore. Small craft can obtain good anchorage close N of this islet.

Boat Bay Light is shown from a structure standing on Swaine Point, 0.5 mile WSW of the W side of the bay.

Robson Bight lies on the S side of the strait, close S of Swaine Point. The Tsitika River flows into the head of this bight, which is filled with a steep-to drying flat. The depths within the bight are too deep for anchorage.

The Sophia Islands, consisting of two large and several smaller islands with numerous drying and below-water rocks around them, form two groups. These groups lie about 0.3 mile

off the N shore, 2.5 miles W of Boat Bay. Baron Reef, with several shoal heads, lies about 0.8 mile NW of the Sophia Islands. Growler Cove, which is approached between this reef and the Sophia Islands, is a narrow inlet. It has depths of 9 to 13m and affords sheltered anchorage to small craft with local knowledge.

Cracroft Point (50° 33'N., 126° 41'W.), the W extremity of West Cracroft Island, is located 2 miles WNW of the Sophia Islands and marked by a light.

Hanson Island lies centered 2.5 miles WNW of the point. This island is 191m high, wooded, and forms the N side of the W end of Johnstone Strait.

7.20 Blinkhorn Peninsula (50° 32'N., 126° 47'W.), 56m high, is located on the S side of the strait, 4 miles WSW of Cracroft Point. A light is shown from this peninsula.

An islet, 15m high, lies in the approach to a small cove, about 0.8 mile WNW of the peninsula.

Ella Point, located 1.8 miles WNW of the peninsula, lies on the S shore at the junction of Johnstone Strait and Broughton Strait.

Blackney Passage (50° 34'N., 126° 41'W.) is entered close W of Cracroft Point. It extends E of Hanson Island, from the N side of Johnstone Strait, into Blackfish Sound. The entrance to Baronet Passage lies is on the E side of Blackney Passage, close N of Cracroft Point.

The tidal currents in Blackney Passage attain rates of 5 knots, at times. Heavy races are formed off Cracroft Point during both the E and W tidal currents. The two portions of the E tidal current, flowing N and S of Hanson Island, meet near the S end of Blackney Passage and cause a strong tide race in mid-channel.

Parson Island, located at the N end of the passage, lies on the E side about 1 mile N of Cracroft Point. A light is shown from a structure standing on a drying rock lying close NW of this island.

Licka Point, located on the W side of the passage, forms the E extremity of Hanson Island and is marked by a light. Alexander Rock, with a depth of 6.7m, lies about 0.4 mile NNW of this point.

Baronet Passage should not be entered without local knowledge as it is encumbered with numerous rocks and shoals. The passage is narrow and leads E between West Cracroft Island and Harbledown Island. It then connects with Clio Channel and Beware Channel, both of which lead to Knight Inlet.

7.21 Blackfish Sound (50° 35'N., 126° 42'W.) lies N of Hanson Island and leads NW from Blackney Passage to the SE part of Queen Charlotte Strait. It can be entered from Johnstone Strait via Weynton Passage and from Broughton Strait via Cormorant Channel.

Parson Bay (50° 35'N., 126° 39'W.) indents the W part of Harbledown Island, at the SE end of Blackfish Sound. Harris Shoals, with a least depth of 11m, lie in the middle of the bay. Anchorage, exposed to NW winds, can be taken, in a depth of 22m, within the SE corner of the bay.

Whitebeach Passage (50° 36'N., 126° 41'W.) is entered on the N side of Blackfish Sound, about 0.8 mile N of Parson Island. It leads S of Compton Island and into Indian Channel. This passage is less than 90m wide at its narrowest part. It is suitable only for small craft with local knowledge and is not recommended.

West Passage is entered 0.8 mile NW of Whitebeach Passage. It leads N of Compton Island and into Farewell Harbor.

Broughton Strait

7.22 Broughton Strait (50° 35'N., 127° 00'W.) leads 15 miles W from the W end of Johnstone Strait to the S side of Queen Charlotte Strait. Its minimum width of about 0.2 mile occurs in Haddington Passage, about midway through the strait. The high mountain ranges, which rise abruptly from the S shore of Johnstone Strait, recede considerably from the S shore of Broughton Strait, leaving the land nearby comparatively low. The islands lying on the N side of Broughton Strait are also comparatively low. The shores of the strait are densely wooded.

Several small ports lie in Broughton Strait and a number of anchorages are available.

Caution.—A Traffic Separation Scheme (TSS), which may best be seen on the chart, exists within Broughton Strait and use of the routes is recommended by the Canadian Authorities.

The separation of traffic is achieved by using Haddington Island as a natural separation zone. The main shipping channel leading through the strait passes to the S of Cormorant Island. Westbound traffic is recommended to pass N of Haddington Island and through Haddington Passage. Eastbound traffic is recommended to pass S of Haddington Island.

Beaver Cove (50° 33'N., 126° 51'W.) lies on the S side of the junction of Broughton Strait and Johnstone Strait. It is entered between Ella Point and Lewis Point, 1 mile W. A light is shown from Lewis Point. A settlement stands on the SE side of the cove and is fronted by a logging port. Numerous piles and dolphins are situated along the E side of the harbor and are used for mooring log booms.

Mount Holdsworth, 901m high, stands 2.5 miles SW of the head of the cove. This mountain has an abrupt fall on its S side and is conspicuous from the E.

Anchorage can be taken, in a depth of 35m, about 0.3 mile from the head of Beaver Cove.

The **Plumper Islands** (50° 35'N., 126° 47'W.) extend 1.3 miles NW from the NW extremity of Hanson Island. The narrow channels leading between the islands and between the islands and Hanson Island are obstructed with many islets, rocks, and shoals. Stubbs Island, 34m high, lies 0.8 mile NW of the northwesternmost island of the group.

7.23 The **Pearse Islands** (50° 35'N., 126° 52'W.), thickly wooded, lie on the N side of Broughton Strait, about 2 miles NW of Ella Point.

Stephenson Islet lies close SE of the Pearse Islands, about 1.5 miles N of Ella Point. This islet is 8m high; two smaller islets lie close SE of it. Vessels without local knowledge are advised not to pass between the Pearse Islands and Stephenson Islet.

Pearse Reefs lie close N of the N extremity of Pearse Island. They consist of several drying and below-water rocks with a detached rock lying about 0.5 mile WNW of the main reef.

Pearse Passage (50° 35'N., 126° 54'W.) is formed between the SW side of Pearse Island and the SE end of Cormorant Island. The passage is about 0.8 mile wide but the channel is narrowed by shoals that extend in places up to about 0.2 mile from its sides. Several small islets and rocks lie on the shoals that front the E side. The tidal currents set obliquely through the passage at rates of up to 5 knots at times.

Gordon Rock, with two heads, dries up to 1.2m and lies in the middle of Pearse Passage. Another rock, which dries 0.6m, lies close E of Gordon Rock. The reefs surrounding these rocks are marked by kelp during the summer, but it is frequently run under by the tidal currents. The best channel leads W of Gordon Rock; however, neither is recommended.

7.24 Comorant Island (50° 35'N., 126° 56'W.) lies on the N side of Broughton Strait, 4.5 miles NW of Ella Point. This island is 128m high in its E part and wooded. It is fringed in most places by beaches of boulders and shingle. A conspicuous white boulder lies close off Gordon Bluff, the SE extremity of the island. A tower, conspicuous from seaward, and a group of radio masts stand 0.5 mile WNW and 1 mile NW, respectively, of Gordon Bluff.

Caution.—Several submarine cables, which may best be seen on the chart, extend across Broughton Strait from Vancouver Island to Cormorant Island.

Several submarine cables, which may best be seen on the chart, extend across Cormorant Channel from Cormorant Island to Malcolm Island.

Yellow Bluff (50° 35'N., 126° 57'W.) is the S extremity of the W part of Cormorant Island. It consists of an overgrown cliff, 30m high. A beach of boulders extends up to about 0.1 mile S from this bluff. Shoals, marked by kelp during the summer, front this beach. A light is shown from a structure standing on a drying ledge close S of the bluff.

Alert Bay (50° 35'N., 126° 56'W.), lying on the S side of Comorant Island, is a small commercial fishing port. The N and E sides of the harbor are lined with an oil company building, a sawmill, a fish cannery, several hotels, and numerous stores. They are fronted by piers and floats. A floating log breakwater and a pile breakwater are situated at the head of the harbor. They provide protection to a small craft float and a seaplane float. A mooring buoy is situated S of the log breakwater. The small craft harbor has a depth of 2.7m and the public wharf has a depth of 9m alongside. A marina is also situated within the harbor.

Two prominent towers stand 0.3 mile SE of the breakwaters.

Nimpkish Bank, which dries in places, extends NW from the S shore of the strait, opposite Comorant Island. A number of small rocks and islets lie on this bank. The N edge of the bank is marked by a lighted beacon and a lighted buoy.

Good sheltered anchorage can be taken, in a depth of 13m, sand, within Alert Bay. Anchorage can also be taken, in a depth of 24m, close off the W side of Nimpkish Bank.

Caution.—The waters of Broughton Strait, which front Alert Bay, are used at times as a seaplane aerodrome.

7.25 Leonard Rock (50° 36'N., 126° 59'W.), with a least depth of 3m, lies on the N side of Broughton Strait. It is located in the W entrance of Cormorant Channel, about 1.5 miles NW of Yellow Bluff. This rock is marked by kelp during the summer and a deep channel leads between it and the W shore of Cormorant Island.

Haddington Island (50° 36'N., 127° 01'W.) lies in the middle of Broughton Strait, 2.5 miles W of the W end of Comorant Island. This island is 85m high, wooded, and steep-to on its E side. The other sides are fronted by reefs. A conspicuous quarry is situated on the SE side of the island. Haddington Island North Light is shown from a structure standing on a drying rock lying close off the N shore and Haddington Island South Light is shown from a structure standing on a drying ledge fronting the SW extremity of the island.

Haddington Passage, about 0.2 mile wide, leads between the S side of Haddington Reefs and the N extremity of Haddington Island. A light and a lighted buoy mark the S edge of the reefs.

Broad Point is located on the S shore of the strait, 1.8 miles W of Yellow Bluff. A sector light is shown from a structure standing 1 mile W of the point and indicates the fairway channel passing W of Haddington Island.

Ledge Point (50° 36'N., 127° 05'W.), the N entrance point of Port McNeill, is located on the S side of the strait, 2 miles W of Haddington Island. Neill Ledge, with depths of 1.8 to 11m, extends E from this point to within about 0.4 mile W of Haddington Island. This ledge is marked by kelp during the summer; lighted buoys are moored off its N and E extremities. The tidal currents set obliquely across Neill Ledge at rates of 1 to 3 knots.

7.26 Port McNeill (50° 35'N., 127° 05'W.) (World Port Index No. 18872) is a logging harbor lying on the S side of Broughton Strait. The land around the harbor is low and thickly wooded. The shores of the harbor are fringed by beaches of boulders and shingle.

The town is fronted by a small craft harbor, with a depth of 3m; a public wharf provides two berths, 18m and 37m long, with a depth of 7.6m alongside. Shell Wharf, situated close E of the town, has a berth, 137m long, with depths of 9.4 to 12.5m alongside. The tidal currents are not felt within the harbor.

Anchorage, sheltered from N and W winds, can be taken, in depths of 9 to 16.5m, within the harbor. Anchorage, with less shelter from N winds, can also be taken, in depths of 16 to 36m, off the entrance to the harbor, close S of Neill Ledge.

Caution.—Vessels are warned that numerous ruined piles and dolphins, many submerged, front the shores of the harbor, especially in the NW part.

At times, part of the harbor is used as a water aerodrome.

7.27 Malcolm Island (50° 39'N., 127° 06'W.) separates Broughton Strait and Comorant Channel from the E part of Queen Charlotte Strait. Donegal Head, the E extremity of the island, is located 4.5 miles N of Ella Point and Graeme Point, the W extremity of the island, is located 4 miles NW of Ledge Point.

The island is comparatively low and undulating, with several rounded and densely-wooded hills. The tallest hill is 189m high and stands near the middle of the N side of the island.

Pulteney Point Light

Dickenson Point is located on the S side of the island. It lies about 3 miles NW of Yellow Bluff and is prominent. Haddington Reefs, consisting of numerous drying and below-water rocks, lie about 0.8 mile SSE of the point and are joined to it by a bank with a least depth of 3.7m. The S edge of the reefs is marked by a light and a lighted buoy. It forms the N side of Haddington Passage.

Caution.—A submarine pipeline, which may best be seen on the chart, extends 0.4 mile WSW from a point located close E of Dickenson Point.

Marine farm facilities, marked by buoys, may be encountered close off the shores of Malcolm Island.

7.28 Rough Bay (50° 38'N., 127° 02'W.) indents the S side of Malcolm Island, close W of Dickenson Point. Good anchorage can be taken, in depths of 11 to 14.6m, about 0.3 mile S of the edge of the drying flat fronting the head of the bay.

Sointula (50° 38'N., 127° 01'W.) (World Port Index No. 18850), a fishing and farming settlement, stands on the E side of Rough Bay, about 0.5 mile N of Dickenson Point. Several piers are available for berthing.

A small craft harbor, with several floats, lies at the N end of the harbor. It is protected by a rock breakwater and has a depth of 3m. A public wharf is situated 1 mile SSE of the small craft harbor. It has a berth at the head, 15m long, with depths of 8.5 to 10m alongside. The berth at the N side is 43m long and has depths of 3 to 7.6m alongside. The berth at the S side is 43m long and has depths of 5.2 to 9.4m alongside. The Imperial Oil Wharf provides a berth, 15m long, with a depth of 6m alongside.

Small vessels can anchor, in depths of 13 to 18m, about 0.3 mile SW of the breakwater. Large vessels can anchor in a depth of 33m off the harbor, but are exposed to the W.

Caution.—The area fronting the settlement is at times used as a water aerodrome.

7.29 Pulteney Point (50° 38'N., 127° 09'W.), the SW extremity of Malcolm Island, is located 0.5 mile SSE of Graeme Point and marked by a light.

Kelp Patch (50° 39'N., 127° 11'W.), with a least depth of 5m, lies about 1 mile NW of Graeme Point. an isolated patch, with a least depth of 12.5m, lies about 2 miles W of Graeme Point.

Weynton Passage (50° 35'N., 126° 49'W.) leads N from the junction of Broughton Strait and Johnstone Strait to the junction of Cormorant Channel and Blackfish Sound. This passage is entered from the S between the dangers lying close E of Stephenson Islet and the islands located close off the W side of Hanson Island. It is deep and not less than 0.8 mile wide.

Stubbs Island (50° 36'N., 126° 49'W.) lies in the center of the E entrance to Cormorant Channel and N of the passage. It may be passed on either side at a prudent distance.

The tidal currents in the passage attain velocities of up to 5 knots at times and set over and across the shoals extending from Stephenson Islet. At times, heavy tide rips occur near both shores and Stubbs Island.

Comorant Channel (50° 36'N., 126° 52'W.) parallels the E part of Broughton Strait and is connected to it by Weynton Passage and Pearse Passage.It is bounded on the N side by the S shore of Malcolm Island and on the S side by Comorant Island and the Pearse Islands.